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BEARING ON THE WAGE QUESTION
IN THE CLIFTON-MORENCI-METCALF
DISTRICT



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BY

Norman Carmichael

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Clifton, Arizona
July 1917

THE WAGE QUESTION IN THE CLIFTON-MORENCI-METCALF DISTRICT

**To Employees of the Arizona Copper Company, Ltd.,
and the Public:**

During times of stress such as this district is passing through at the present time, many misstatements, some of them made wilfully for the purpose of creating erroneous impressions on the public mind and others made unwittingly as a result of misinformation, find a ready circulation and prevent a proper conception of true conditions in relation to questions at issue.

This is written for the purpose of clearing up some of the misunderstanding which I believe exists, and I wish to put a few facts before you in order that those who desire to form a well-balanced opinion in their own minds regarding the present controversy may have a correct basis to start from.

There appears to be a deeply grounded opinion on the part of a certain section of the mine workers that a uniform scale of wages should obtain in all mining camps of this state and our employees have demanded a scale which is in effect in the Miami district.

It is, I think, safe to say that in no industry today does a uniform scale of wages exist, for a very good reason—that conditions vary so much in different places what would be fair in the case of one concern or locality would be totally unfair in the case of another.

I would like to point out a few reasons why the application of what is known as the Miami scale would not be fair to the operators in this district, and would not be of permanent benefit to the community.

Operations in the Miami district are of very recent inception. The Miami Copper Company commenced production in 1911, while the Inspiration Company began producing only last year. The properties of these two companies adjoin and may be considered as one immense ore deposit. Both properties were fully developed before stoping operations were commenced, and the owners had accurate knowledge of the size, shape and copper contents of this mineralized area, with which information they were enabled to lay their plans for mining the ore in the most economical manner.

The science of mining large ore bodies has advanced very rapidly within the past few years and these companies had the opportunity of taking advantage of the very latest methods and of applying them to an unbroken area, while the highest talent has been freely used in solving the various problems connected with the mining and treatment of the ores, involving years of preparation and the expenditure of vast sums of money in order that operating labor might be saved and other expenses reduced to a minimum. A comparison between the conditions found in the Miami district with those obtaining in the Clifton-Morenci-Metcalf district is opportune and should be taken into consideration when discussing the wage question as affecting these respective districts.

The mines at Morenci and Metcalf have been worked as long as any in the state, having been opened in the early seventies or nearly fifty years ago; in fact, it might truthfully be said that copper mining in Arizona had its beginning in this district. These mines were first worked for their high grade oxidized ores which were smelted direct; later larger bodies of porphyry ores containing enriched veins of sulphide ore were discovered and the mining out of

these higher grade ores was commenced, using the most approved method of those days, viz: the square set system, but involving the use of enormous quantities of timber. The more recently developed methods of mining have been introduced and have replaced the older method as far as they could be applied, but their application has been restricted on account of the fact that the older workings interfered with any broad application such as is possible in the case of ore bodies laid out in the new before mining operations are commenced. The remaining ore in the case of our older mines lies in comparatively small and detached masses, scattered irregularly throughout a considerable area, honeycombed with old stopes, involving an intricate system of mine workings to reach them and for transporting the ore, and the use of a large amount of labor split up into many small units.

Similarly it can be readily shown that the development of these scattered ore bodies involves vastly greater expense than is required in the case of one ore body which is self-contained.

In the case of Miami, two mining companies produce an aggregate of about 24,000 tons of ore per day, while in this district the three companies produce but 7000 tons per day. The mines in the Miami district are served with a standard gauge railroad delivering supplies to all their plants; in this district the mines are situated in wilder and more inaccessible locations and the three companies have each a system of narrow gauge railroads aggregating 35 miles in length, operating over heavy grades, involving the transfer from standard to narrow gauge and in every case a further transfer from narrow gauge to baby gauge, with perhaps a haul over inclines in order to get their supplies to their mines and works.

Comparing the smaller of the mining companies in the Miami district with the larger of the three companies operating in this district, both of which pro-

duce about the same amount of ore and make about the same amount of copper per month, it may be aptly pointed out that in the case of the Miami Company there is but one mining organization under one staff, superintendent, foreman, and shift bosses. Their mining operations, while carried on on a comprehensive scale, are confined within a very limited area, the ore drops by gravity from the stopes to the haulage levels and by a comparatively short haul by electric motors is delivered to a central shaft through which it is hoisted direct to the concentrator.

In our case we work twelve separate mines scattered over a district four miles long by two miles wide, each with its own organization and connected together by an extensive system of transportation levels and tunnels many miles in length, partly operated by electric motor, partly by steam and partly by mule power, requiring the use of four shafts, four inclines and two aerial tramways with all the necessary hoisting engines and involving a heavy cost for maintenance, as also for operation.

In addition to all this we have a system of surface workings, operated by from 200 to 300 leasers, scattered over the hills, producing ore in small quantities at numerous points from which it has to be gotten and packed by burros to points on our transportation system, all of which cost must be absorbed in the "General Mine Expense."

In the former case, their ore is treated by one concentrator and in our case by two, each with its attendant staffs and tailings disposal plants.

In the case of Miami, two sampling plants suffice; in our case the same work requires five; they have one assay office, we have five, not including the one in our smelting department. Similarly, where one machine shop can take care of the work of the mine and concentrator, we require three; and similar disparity will be found to hold good in the case of mine offices, time keeping staffs, supply warehouses, blacksmith shops, air compressor plants, mine

change houses and sundry other indispensable plants.

It is true that in limited areas of the larger mines in this district costs approximating those obtained in the Miami mines can be attained, but these areas are very limited and can in no way be taken as a criterion of the general cost of mining in this district, and what is true of the Arizona Copper Company is equally true, and to an even greater extent, in the case of the two other companies operating here.

These conditions are reflected in the tonnage output per man in each of the two districts, thus in the month of May, 1917, there were mined by the Inspiration and the Miami Companies a total of 777,220 tons of ore, or 25,071 tons per day. The total number of men employed in their mining departments by these two companies was 1875, or a yield of 13.4 tons per man per day.

In the Clifton-Morenci-Metcalf district, the Arizona, Phelps-Dodge and Shannon Companies together mine 6,710 tons per day, and employ in their mining operations 3730 men, equivalent to a yield of 1.8 tons of ore per man per day.

Making further comparison on the basis of copper produced, the Inspiration and Miami Copper Companies employed a total of 3748 men in all their mining, concentrating and smelting operations (International Smelter) for the month of May, and produced a total of 17,187,592 lbs. of copper, or a yield per man per day of 147 lbs.

The three companies operating in the Clifton-Morenci-Metcalf district in their total mining, concentrating and smelting operations employ 5,197 men and produce 7,952,000 lbs. of copper per month, equivalent to a yield of 51 lbs. of copper per man per day.

While it is true that the above difference in the yield per man is essentially due to the different conditions obtaining in the two districts another factor comes into play, for it is also a fact that mining labor

in this district is not equal in efficiency to the labor in other districts, nor are our miners as efficient as they were a few years ago.

An extract from the records of one of the operating companies may be given as illustrative of this unfortunate circumstance.

In the mine in question some 600 men are employed and while no change has been made in mining methods used which would account for any diminution of the output per man, the following figures show the facts:

	Tons Per Man Per Shift	Average Wage Per Shift
1914	2.52	\$2.30
1915	2.60	2.34
1916	2.22	3.72
1917	2.18	4.12

Thus while wages have steadily and rapidly advanced during the past four years, the average output per man has steadily declined.

During 1915 many of our best miners left the district and the companies here are handicapped by the necessity of using a large number of men some of whom are not physically able and others who are not mentally disposed to turn out an average day's work, and while there are many employees in our mines to whom the above remark does not apply, inquiry amongst the various foremen and shift bosses in charge of the operations in the mines will corroborate this statement.

The attitude of a certain important section of the mine employees towards their superior officers has also been anything but satisfactory for some time past, the deliberate opposition shown to any method introduced for the purpose of increasing efficiency, the spirit of insubordination and indifference so frequently shown, and the lack of cooperation and loyalty, are factors not conducive to the harmony and good feeling which should exist and unless the com-

panies can be assured of better esprit de corps and a heartier cooperation with them amongst the employees there is little inducement to reopen the mines.

I would like to call particular attention to the total number of men employed by the two large companies operating in the Miami district, viz: 3748, while the total number employed by the three companies operating in this district is 5197, although the Clifton-Morenci Companies produce less than one-half the quantity of copper produced by the Miami companies.

The result of forcing a wage scale higher than the one now in effect upon this district would necessarily be followed by a large reduction in the number of men employed, the curtailment of operations, and the working of such properties only as could stand the greatly increased expense. The small mines of the large companies would be closed down, except during periods when copper sells at a figure higher than its average price, while the small operator could not exist, a condition which would not bring prosperity to this community.

Only so lately as March, 1916, the employers and employees in this district entered into an agreement with respect to wages that should be paid in this district, with copper selling at different prices. The wages agreed upon involved substantial increases over rates previously in effect. Had this agreement provided a fixed rate of wages for different classes of work, irrespective of the price at which copper sold, there might be justification for the employers wishing to reopen the question at the present time, and unforeseen circumstances could very aptly be used as an argument in their favor, but the case is quite different; the scale agreed upon was a movable one and just as binding upon the companies and employees at 30c copper as at 13c copper, and while the lower range of wages has not been experienced since the agreement was entered into, and notwithstanding the fact that our employees are enjoying a

higher rate of wages than received at any previous period in the history of this camp, they have deemed it an opportune time to repudiate their agreement in an endeavor to force upon the companies a still higher scale and one which the companies maintain would be unfair to them.

The present high cost of living is given as a reason for the demand for this superwage. It cannot be argued that a wage scale which slides with the price of the product contemplates a stationary cost of living, that the increased wages will be all profit, for it is a well known fact that when one important and widely produced commodity such as copper goes to abnormally high prices, the cause for such a condition usually affects other commodities in a similar manner and the result is a general increase in the cost of living, hence this very condition is taken care of by the sliding scale.

I have gone into this question quite carefully with a serious desire to obtain a correct idea as to what this increased cost of living amounts to, as affecting the people generally.

It is true that owing to the war the cost of the necessities of life has gone up and that certain luxuries are unobtainable, but just to what extent this has affected the cost of living very few have a well defined idea. It is a fact that the price of flour has advanced 75 per cent since the beginning of last year, but people do not live on flour alone and to an ordinary family of four or five persons this great increase in cost will probably not mean more than \$2 or \$3 per month. Many other staple commodities have advanced but slightly and in order to know what the average increase has been one must take into account the various items which go to make up the monthly household bills.

The following bill of goods has been made up with the object of showing what change in prices has occurred during the past two years in the case of staple articles commonly used in any ordinary household.

The total amount of the bill, which for the year 1917 sums \$100.00 is a purely arbitrary figure, chosen for the purpose of making easy comparison, and in no sense is to be taken as representing a month's requirements for an ordinary family.

The prices are taken from actual charge slips and in every case can be verified.

BILL OF GOODS

	July 1915	Feb. 1916	June 1917
GROCERIES:			
100 Lbs. Flour	4.25	4.25	7.50
25 Lbs. Sugar	2.00	2.00	2.50
50 Lbs. Potatoes	1.75	1.80	2.75
3 Lbs. Coffee G. G.—G. G.—MJB	1.20	1.20	1.20
3 Lbs. Arbuckles	.75†	.75†	
2 Lbs. Tea	1.50	1.50	1.30
15 Lbs. Lard	2.40	2.30	4.40
5 Lbs. Fancy Bacon	1.75	2.00	2.25
6 Lbs. Butter	2.40	2.70	2.85
2 Lbs. Cheese	.60	.60	.70
½-Lb. Chocolate	.25	.25	.25
10 Doz. Eggs	3.50	4.50	5.00
8 Pkgs. Breakfast Cereals	1.00	1.00	1.00
1 Lb. Golden Gate Baking Powder	.35	.40	.50
4 Pkgs. Macaroni	.50	.50	.60
8 Pkgs. Crackers	.80	.80	1.00
8 Bars Laundry Soap	.40	.40	.50
1 Pkg. Laundry Powder	.25	.25	.25
1 Bottle Blue	.15	.15	.25
½ Gal. L. C. Syrup	.90	.90	1.00
1 Ham, 12 Lbs.	2.85	3.00	3.95
6 Cans Table Fruit	1.50	1.50	1.25
1 Case Assorted Canned Vegetables (24 cans)	2.90	2.90	4.40
3 Cans Pork & Beans 3 lb.	.70	.70	1.00
2 Cans Pink Salmon ½ lb.	.40	.40	.40
5 Lbs. Rice	.50	.50	.50
2 Doz. Milk	2.20	2.50	3.00
1 Can Cocoa	.30	.30	.30
2 Sacks Salt	.10	.15	.15
¼ Lb. Pepper	.10	.10	.20
1 Sack Corn Meal 10 lbs.	.40	.40	.65
1 Bottle Extract	.35	.35	.50
2 Lbs. Prunes	.25	.25	.40
1 Lb. Evap. Apricots	.20	.20	.30
2 Jars Jam	.70	.70	1.00
1 Bottle Catsup, Qt.	.35	.35	.65
1 Jar Pickles	.50	.50	.40
1 Jar Mustard	.20	.20	.20
2 Pkgs. Starch	.20	.20	.20
3 Bars Toilet Soap	.25	.25	.25
3 Pkgs. D. Matches	.30	.30	.25
1 Qt. Vinegar	.40	.40	.25
1 Bottle Salad Dressing	.40	.40	.35
7 Lbs. Pink Beans	.60	.70	1.00
	42.60	44.75	57.35

		Per Cent	Per Cent
Increase over 1915		5.05	34.62
Increase over 1916			28.15
†Not included in total.			
		July	Feb.
		1915	1916
			June
			1917
FRESH VEGETABLES:			
12 Heads Lettuce	1.00	1.00	1.00
3 Bunches Turnips	.25	.25	.30
3 Bunches Beets	.25	.25	.30
2 Lbs. Peas	.25	.25	.25
2 Lbs. String Beans	.10	.10	.25
6 Lbs. Tomatoes	.90	.90	.75
3 Bunches Green Onions	.15	.15	.15
	-----	-----	-----
	2.90	2.90	3.00
Increase over 1915		Per Cent	Per Cent
Increase over 1916		0.00	3.49
			3.49
FRESH FRUIT:			
1 Doz. Oranges	.40	.40	.40
2 Lbs. Apricots	.30	.30	.25
3 Lbs. Peaches	.30	.30	.35
	-----	-----	-----
	1.00	1.00	1.00
Increase over 1915		Per Cent	Per Cent
Increase over 1916		0.00	0.00
			0.00
MEAT:			
10 Lbs. Pot Roast	2.50	2.50	2.50
5 Lbs. Veal	1.25	1.75	1.50
5 Lbs. Mutton	1.25	1.50	1.25
5 Lbs. Pork	1.25	1.50	1.50
3 Lbs. Sausage	.60	.70	.75
	-----	-----	-----
	6.85	7.95	7.50
Increase over 1915		16.06	9.49
Decrease under 1916			5.66
DRY GOODS:			
1 Pr. Levi Strauss Overalls	1.00	1.25	1.50
1 Blue Chambray Work Shirt	.50	.50	.50
1 Heavy Chambray Shirt	1.00	1.00	1.25
2 Pr. Work Sox (Cotton)	.25	.25	.25
2 Pr. Cooper Sox	.50	.50	.50
1 Pr. Canvas Gloves (Progress Mfg. Co.)	.25	.25	.35
1 Suit Heavy Ribbed Cotton Underwear	1.00	1.00	1.50
5 Yds. Gingham	.75	.85	1.00
5 Yds. Bleached Muslin	.50	.65	.75
3 Turkish Bath Towels	.75	.90	1.00
6 Yds. Dark Calico	.50	.50	.75
3 Prs. Ladies' Hose	1.05	1.05	1.35
2 Yds. Cotton Poplin	.70	.70	.80
6 Yds. Unbleached Muslin	.50	.60	.75
	-----	-----	-----
	9.25	10.00	12.25
Increase over 1915		Per Cent	Per Cent
Increase over 1916		8.11	32.43
			22.50

BOOTS & SHOES:

1 Pr. United Workmen Shoes	4.50	5.00	5.50
		Per Cent	Per Cent
Increase over 1915		11.11	22.22
Increase over 1916			10.00

HARDWARE:

1 Stewpan (enamel ware)	.60	.60	.75
1 Coffee Pot	.75	.75	.75
1 Dish Pan	.60	.60	.75
1 Wash Basin	.40	.40	.50
1 Drip Pan	.20	.20	.25
½ Lb. Sole Leather	.65	.65	.75
½ Doz. Cups & Saucers	.75	.75	1.20
	-----	-----	-----
	3.95	3.95	4.95
		Per Cent	Per Cent
Increase over 1915		0.00	25.32
Increase over 1916			25.32

DRUGS:

1 Jar (4 oz.) Cold Cream	.25	.25	.20
1 Bot. (1 ½ oz.) La Sanadora	.25	.25	.25
1 Bot. (3 oz.) Volcanic Oil	.25	.25	.25
1 Bot. (9 oz.) Scott's Emulsion	.50	.50	.60
1 Box Melba Face Powder	.50	.50	.50
1 Tablet Writing Paper	.15	.15	.15
	-----	-----	-----
	1.90	1.90	1.95
		Per Cent	Per Cent
Increase over 1915		0.00	2.63
Increase over 1916			2.63

FUEL:

½ Ton Coal	6.50	6.50	6.50
		Per Cent	Per Cent
Increase over 1915		0.00	0.00
Increase over 1916			0.00
TOTAL	\$79.45	\$83.95	\$100.00
		Per Cent	Per Cent
INCREASE OVER 1915		5.66	25.87
INCREASE OVER 1916			19.12

It will be seen from the above that groceries have advanced 34.62 per cent since 1915; fresh vegetables 3.49 per cent; meat, 9.49 per cent; dry goods, and clothing, 32.43 per cent; boots and shoes, 22.22 per cent; hardware, 25.32 per cent; toilet articles, 2.63 per cent; while a few articles such as fresh fruit and coal have not advanced at all.

Taken together the cost of this bill of goods in July 1915 would have been \$79.45, and in June 1917, \$100.00 even, a total increase of 25.87 per cent.

Different articles may be substituted for those in the above list, but when such items under any one heading are added together it will be found that the total percentage of advance is approximately as shown.

While the above bill of goods shows an increased cost of a little better than 25 per cent, it is not to be assumed that this figure reflects the average increased cost of living, there are many other items which should be taken into consideration.

It is not out of the way to assume that 50 per cent of the cost of maintaining a family will fall under the headings shown in the above bill, leaving 50 per cent for other requirements, such as house rent, water, ice, lights, taxes, books, papers, tobacco, entertainments, traveling expenses, etc., while a proportion is, or should be, set aside for savings.

It is a matter of common knowledge that few, if any, of the items in the supplementary list have increased in cost during the past two years; automobiles, gasoline and tires have advanced, no doubt, but I am not considering these. Fresh milk has recently advanced $12\frac{1}{2}$ per cent. House rents in certain cases which were reduced when things slumped at the time war was declared in Europe, have been restored to their former level; in other places no changes have been made, a few have been raised while on the other hand a large number of employees own their own homes, consequently that cost to them has not increased. To be safe, however, we will as-

sume an average advance of 10 per cent on the supplementary list.

If then we take a 25 per cent increase, as affecting 50 per cent of the wages received, and 10 per cent increase with respect to the other half, the total increase in the cost of living works out at 17.5 per cent.

Coming now to the question of wages and the ability to meet this increased cost of living, I will call your attention to the fact that in 1915 the average wage paid in this district was \$2.72 per day, while the average wage paid during the first six months of the present year was \$4.27 per day. Thus while the increased cost of living to married employees in this district may be taken at less than 20 per cent, wages have increased 57 per cent.

If a similar comparison be made between the wages and the cost of living this year as compared with the same conditions last year, it will be found that the increase in wages has slightly less than offset the increase in the cost of living, thus:

Average Wage March 1916	\$3.86
Average Wage January to June 1917	4.27
Increase 10.6 per cent	

Increased cost of living:

Fifty per cent at 19.12 per cent	
Fifty per cent at 10.0 per cent	
Average	11.4 per cent

This difference is equal to eighty cents upon every one hundred dollars earned in wages in the case of the man with family.

In the case of unmarried employees whose proportionate expenditure on the necessities of life is much smaller than in the case of married employees, the increased cost of living is not so seriously felt, and their increase in wages is consequently greater in proportion.

That the average employee is finding it possible to save a fair proportion of his earnings is reflected in the increased amount of deposits in the local banks

The following statement shows the average total

deposits in all banks in this district for the past three years:

Year 1915	\$1,501,675
Year 1916	1,809,533
Year 1917	2,406,276

These figures show an increase of \$300,000, or 20.50 per cent in 1916 over 1915; and an increase of \$600,000 or 32.98 per cent in 1917 over 1916.

No figures can be more persuasive in testifying to the prosperity of this community and employees generally, and would certainly indicate that present wages provide a considerable margin even after the present high cost of living is met.

The State Auditor reports the amount of deposits in all banks in the state for the past two years to be:

Year 1916	\$46,137,360
Year 1917	60,308,715
Increase	14,171,355

This increase of 14,000,000 odd dollars is equal to 30.7 per cent over the previous year, which compares with an increase of practically 33 per cent for our own district, showing that our people are enjoying relatively greater prosperity than their fellow citizens in the state.

That this company has not "hogged it all" and has at least returned to its employees a fair share of its earnings can best be shown by a statement of the amount paid to its shareholders in dividends, in terms of cents per pound of copper produced during

the past ten years, for which purpose the following statement is submitted :

Year	Production Lbs. Copper	Ave. Price Received per lb. cu. Cents	Dividends Pd. Cts. per lb. cu.
1907	27,404,000	19.92	5.48
1908	33,942,000	12.60	3.07
1909	31,962,000	12.58	3.26
1910	32,210,000	12.32	3.23
1911	34,584,000	11.95	3.01
1912	38,132,000	15.06	3.45
1913	34,226,000	15.35	3.31
1914	38,756,000	13.51	1.97
1915	37,330,000	15.40	2.49
1916	34,100,000	25.90	4.59
<hr/>			
Average	34,264,400	15.37	3.32

From this table it will be seen that during the past ten years The Arizona Copper Company has received on an average 15.37 cents per lb. for the copper it produced, out of which its shareholders have received only 3.32 cents per lb. in returns.

The figures for the Detroit Copper Company are not available, but it is known that the costs of that company are higher than those of the Arizona Copper Company.

In the case of the Shannon Copper Company the figures are still more convincing and clearly show how unfair to that company the present wage demand is, the results of their operations are given below:

Year	Production Lbs. Copper	Ave. Price Received per lb. cu. Cents	Dividends Pd.
1904	11,059,909	12.516	
1905	11,295,586	14.2476	
1906	10,970,333	17.4929	
1907	13,418,126	22.3171	\$450,000
1908	16,385,290	13.7275	
1909	17,553,213	13.2652	
1910	17,924,198	12.9498	
1911	15,630,090	12.355	
1912	16,406,336	14.8758	150,000
\$1913	18,793,724	15.8696	150,000
1914	9,003,169	13.6263	
1915	6,017,642	17.7994	
1916	9,364,968	27.24 41	150,000
-----		-----	-----
Total	173,822,584 lbs. cu.	15.538	\$900,000
§16 mo. period.			

From this statement it will be seen that for the thirteen years during which operations have been carried on, the Shannon Copper Company have produced a total of 173,822,584 lbs. of copper, receiving on an average 15.538 cents per lb. for the product, out of which its shareholders have received only six tenths of one cent per lb. in returns.

When it is considered that the shareholders of the Arizona and Shannon Companies together number nearly 10,000 or about twice the number of employees in the entire district, many of whom are wage earners like themselves, having invested their savings against the "rainy day", and when it is realized that the amounts paid in dividends have to be divided among so large a number, it should be readily conceded that the individual share holder has received very meager, in fact totally inadequate, returns

Norman Carmichael.

General Manager.

Clifton, Arizona. July, 1917.

